

# Commonwealth of Virginia Prenatal Care Study SFY 2002



*Improving Health Care in the Communities We Serve*

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## Section I

### Prenatal Care Clinical Study

#### Introduction

The Commonwealth of Virginia Department of Medical Assistance Services (DMAS) is charged with the responsibility of evaluating the quality of prenatal care provided to Medical Assistance recipients enrolled in the MEDALLION Primary Care Case Management (PCCM) program and the Medallion II Managed Care Organization (MCO) program. To ensure that the care and outcomes related to pregnancies and births of women enrollees meets acceptable standards for access, timeliness, and quality, DMAS contracts with the Delmarva Foundation for Medical Care, Inc. (Delmarva) to serve as the External Quality Review Organization (EQRO).

This report summarizes the results of Delmarva's second analysis of prenatal care for participants in the MEDALLION and Medallion II programs. Timely and high quality prenatal care is critical for both the mothers and the children that are born. Beginning care within the first trimester and obtaining the recommended numbers of prenatal visits are essential to reduce the likelihood of complications and premature deliveries. Complications and premature births can result in long-term health problems for the child and enormous expense to the health care system. Because many women are enrolled in Medicaid as a result of their pregnancy and because these women are from racial and ethnic groups that historically have had poorer quality prenatal care, it is critical that DMAS understand factors associated with poorer outcomes and that they compare the performance of the MEDALLION program and the Medallion II MCO's against each other and with external norms. This comparison will assist DMAS in identifying any programmatic differences that might affect access to early prenatal care or impact birth outcomes.

Assessing the quality of prenatal care during SFY 2002 is the focus of this report. The sections that follow provide an overview of the specific purposes and objectives of this report, describe the methodology employed to analyze available data, and summarize key study findings and recommendations. This report follows the structure of last year's report, in which short summaries of these sections are followed by a series of "at a glance" results that provide tables, figures, and additional detail.

## Purpose and Objectives

Delmarva Foundation is under contract with the Virginia Department of Medical Assistance Services (DMAS) to provide external quality review of the managed care programs. This prenatal care study provides information about the care and outcomes related to pregnancies and births of women who were Medicaid recipients during State Fiscal Year (SFY) 2002 (July 1, 2001 through June 30, 2002). Access, timeliness, and quality care are expectations for all persons enrolled in the MEDALLION and Medallion II programs. This expectation is particularly critical for pregnant women and their babies. Ascertaining whether these requirements have been met is the major goal of this report.

Specifically, this report addresses a number of objectives:

- Determining the prevalence of obtaining prenatal care in the first trimester for women enrolled in Medicaid and comparing this prevalence to earlier periods and established norms.
- Describing the reasons for Medicaid enrollment for women who gave birth in SFY 2002.
- Comparing the percentages of women who obtained prenatal care in the first trimester across programs and plans.
- Ascertaining whether delayed enrollment was a factor in the failure to obtain early and adequate prenatal care.
- Examining demographic factors such as age and race that may be associated with poorer care processes and outcomes.
- Determining the prevalence of low and very low birth weight children for women enrolled in Medicaid and comparing this prevalence to earlier periods and established norms.
- Comparing the prevalence of low and very low birth weight children for women enrolled in fee for service, the MEDALLION program and Medallion II MCOs.

Delmarva's approach to accomplishing these objectives is described in the following section.

## Methodology

The study population includes women for whom evidence of a birth was found in DMAS administrative databases and the Virginia Birth Registry. The study population was limited to those who were enrolled in managed care or the fee-for-service (FFS) program for at least 280 days prior to delivery. Women eligible for Medicaid due to pregnancy were also included, regardless of enrollment span. The study population is divided into three categories based upon Medicaid eligibility criteria. The categories were used in order to reduce the confounding of results that may be attributed to the length of time that women are in Medicaid and the length of time they are enrolled in a Medicaid program. The categories are as follows:

- Women who were newly eligible for Medicaid due to pregnancy. This group is labeled Newly Medicaid Eligible.
- Women who receive Supplemental Security Income. This group is labeled SSI.
- Women in all other eligibility categories (including Temporary Assistance to Needy Families, refugees, low-income families with children, etc.). This group is labeled Other Medicaid.

Results are provided for the entire Medicaid population and by Medicaid program, demographic characteristics, and managed care organization (MCO). The Medicaid programs are as follows:

- FFS, considered traditional Medicaid.
- The MEDALLION primary care case management (PCCM) program in which recipients select a primary care provider who provides a medical home and authorizes some specialty care.
- The Medallion II MCO program in which recipients enroll in an MCO that provides care through its network of providers.

After merging the birth registry and claims data, analyses were performed using SAS and SAS programs. While most analyses replicate ones performed for last year's report, the SAS programs were modified to reflect the new state fiscal year being analyzed, changes in the MCOs participating in the Medallion II program, and to obtain more detailed information about recipients' racial background. Results were validated using the following steps:

- SAS programming code was reviewed by a research scientist at Delmarva to validate the analytic logic
- Results from these programs were compared with results obtained last year to validate that sample sizes were as expected and results were similar.

## Findings

Major findings are summarized in the bullet points shown below. These findings as well as additional and more detailed results are shown in a series of tables and figures contained in Section Two.

- The majority of women (77%) in Medicaid who gave birth in SFY 2002 began prenatal care in the first trimester of pregnancy. This compares to 78% in SFY 2000.
- The majority of women (90%) in Medicaid who gave birth in SFY 2002 were newly eligible for Medicaid due to pregnancy and 66% of women newly enrolled had a start of prenatal care date that came before their application date.
- Fewer women in the FFS program began prenatal care in the first trimester and received the expected number of prenatal care visits compared with women in the managed care programs. Differences between these programs are virtually identical to those observed in SFY 2000.
- Seventy-one percent of women in FFS, who became Medicaid eligible because of pregnancy, were determined eligible for Medicaid in the third trimester of pregnancy. These women received retroactive

eligibility to Medicaid, which covered their care from conception or for three months prior to their application date, whichever came later. This represents a 6% increase from SFY 2000.

- Forty-two percent of women in MEDALLION, who became Medicaid eligible because of pregnancy, were in the third trimester when they were enrolled in the MEDALLION program. The percentage enrolled in MEDALLION prior to the third semester increased from 47% in SFY 2000 to 58% in SFY 2002.
- Forty-nine percent of women in Medallion II, who became Medicaid eligible because of pregnancy, were in the third trimester when they were enrolled in an MCO. This percentage dropped from 58% in SFY 2000.
- Twenty-five percent of women enrolled in FFS were age 30 and above. This is a higher percentage than observed in the MEDALLION and Medallion II programs. The percentage of women in FFS between the ages of 20 and 29 (56% in FFS vs. 65-68%) was lower than in MEDALLION or Medallion II.
- As compared with white women, African-American, Asian, and Hispanic women tended to initiate care later in pregnancy and have fewer visits once care was initiated, but only African-American women had a higher percentage of low and very low birth weight babies. Disparities between whites and African-American women remained constant from SFY 2000, but the percentage of births to white women decreased while the percentage born to African-American women remained constant and the percentage born to other minorities increased.
- The rate of low and very low birth weight for infants was highest for women in the FFS program. These percentages are essentially unchanged from two years ago.

## Conclusions and Recommendations

- The majority of women enrolled in Medicaid who delivered babies were newly eligible for Medicaid due to pregnancy and started prenatal care before applying for Medicaid. Therefore, we recommend developing approaches that will publicize the availability of Medicaid for eligible women so that a higher percentage can begin appropriate prenatal care in their first trimester.
- A higher proportion of women in FFS who were not new to Medicaid were African American and age 19 and under. Hispanic women were also highly represented in the FFS program. We recommend further study to identify the reasons why these populations are less likely to enter the MEDALLION and Medallion II programs. We also recommend that additional targeted efforts be made to improve the early start of prenatal care for these populations.
- A higher percentage of women in managed care received the expected number of prenatal care visits and had lower rates of poor birth outcomes. While women appear to be entering these programs earlier than in the past, we recommend continued efforts to enroll pregnant women even earlier in these programs. Success in this effort may increase the adequacy of prenatal care and result in better birth outcomes.

## Section II

### AT-A-GLANCE - Prenatal Trends and Outcomes

#### 77% of Women Started Prenatal Care in First Trimester of Pregnancy During SFY 2002

Figure 1 displays the trend analyses of initiation of prenatal care within first trimester of pregnancy (SFY 1998–2002). Rates have remained essentially unchanged between SFY 2000 and SFY 2002.

**Figure 1. - Trends in Timely Initiation of Prenatal Care - Within 1st Trimester - All Medicaid**

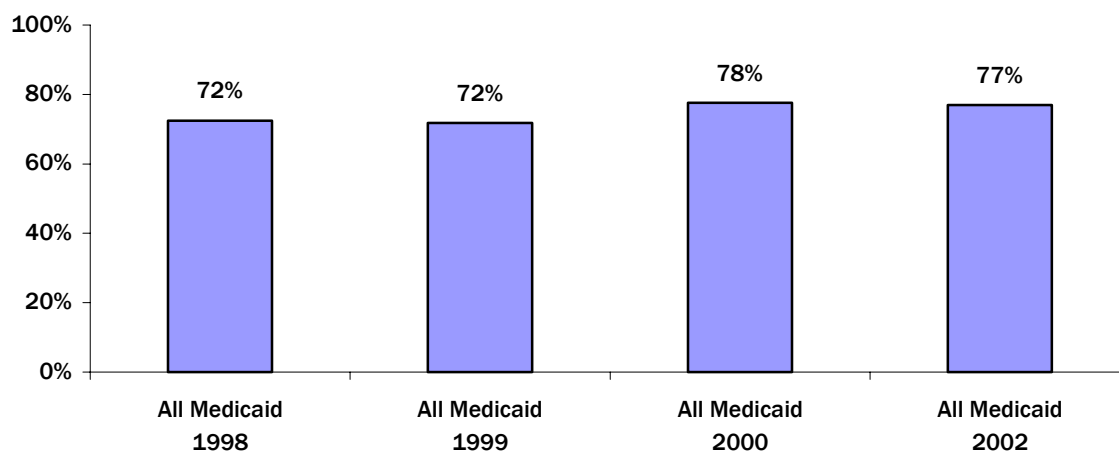
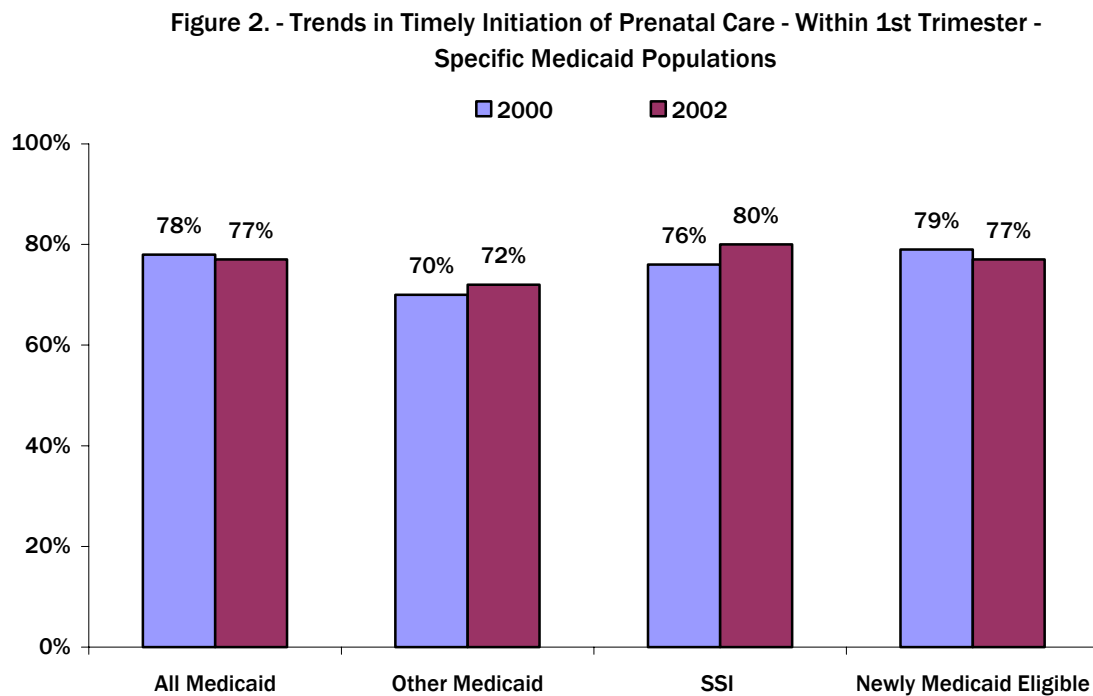


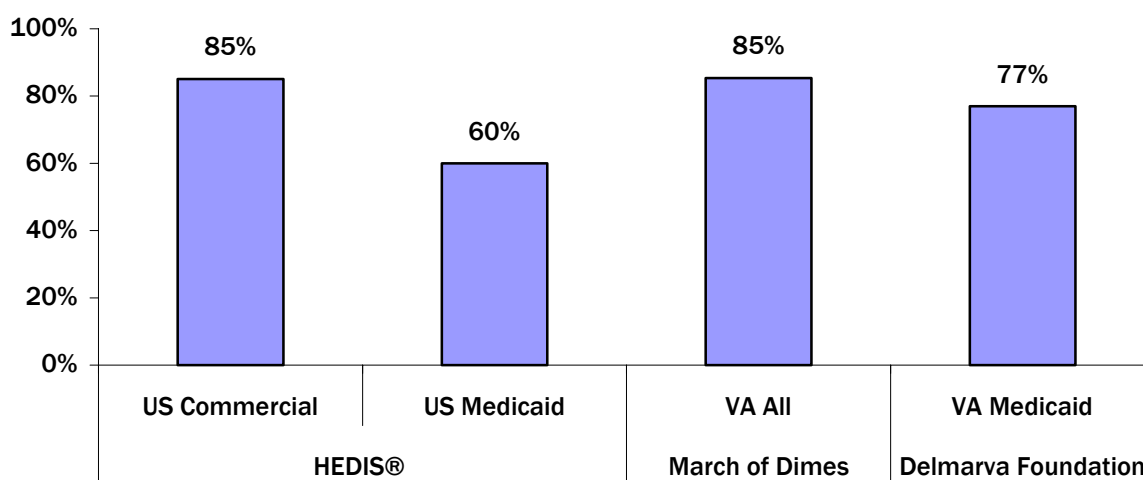
Figure 2. Displays SFY 2000 and SFY 2002 rates for the timely initiation of care overall and for three distinct Medicaid populations. Because the newly eligible for Medicaid group is the largest, a small decline in the percentage of women whose care was initiated in a timely manner within this group caused the overall rate to decrease, despite small increases in the other two Medicaid populations.



### Virginia Medicaid Results for Initiation of Prenatal Care in SFY 2002 Compare Favorably With National and Virginia Statewide Benchmarks

Figure 3. displays the national HEDIS® results for commercial and Medicaid populations and Virginia statewide results (from March of Dimes and Virginia Medicaid based on most current data available).<sup>1,2</sup> Although VA Medicaid rates are somewhat below the overall rates in VA and the US, the VA Medicaid rates are 17% above the national rate for the Medicaid population.

**Figure 3. - Timely Initiation of Prenatal Care - Benchmark Comparisons**



<sup>1</sup> The Health Employer Data and Information Set (HEDIS®) is a nationally recognized benchmark for health plan performance compiled by the National Committee for Quality Assurance. Data reported here is for CY 2002.

<sup>2</sup> March of Dimes data is drawn from their 2003 report, but is based on data from CY 2000. Delmarva data is based on SFY 2002.

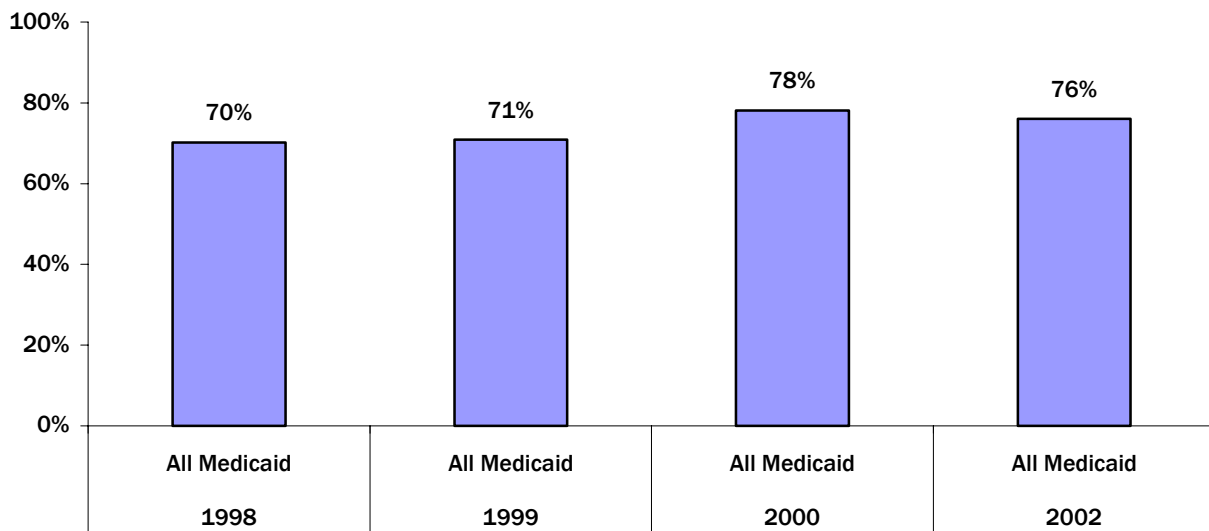
## Adequate Prenatal Care Dropped Slightly Between SFY 2000 and SFY 2002

A standard measure of the adequacy of prenatal care was used. This measure classifies whether each pregnant woman met the following two criteria:

- She began receiving prenatal care within four months of conception, and
- She had the expected number of prenatal care visits.<sup>3,4</sup>

Figure 4 displays the proportion of mothers receiving adequate prenatal care in SFY 1998–2002. Overall, the percentage of women receiving adequate care dropped from 78% to 76%.

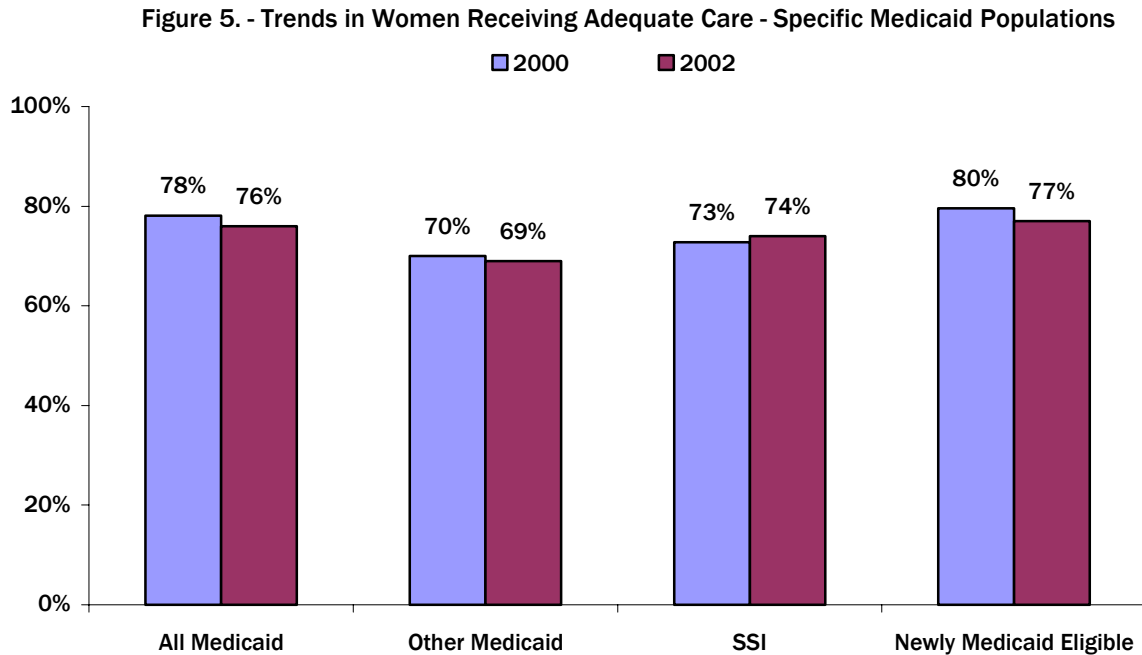
**Figure 4. - Trends in Women Receiving Adequate Care**



<sup>3</sup> Results from 1998 and 1999 provided by George Mason University.

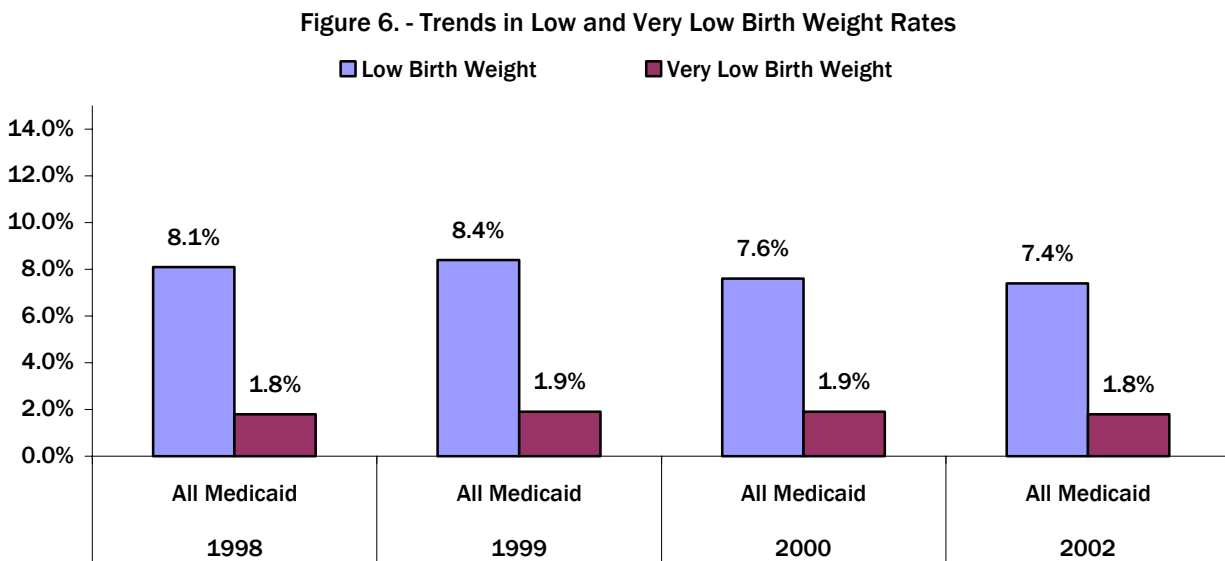
<sup>4</sup> Kotelchuck, M. (1994). An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. *American Journal of Public Health*, 84(9), 1414-1420.

Figure 5 summarizes the percentages of women receiving adequate care in SFY 2000 and SFY 2002. While marginal changes occurred in the Other Medicaid and SSI groups, the largest group's (Newly Eligible for Medicaid) percentage dropped from 80% to 77%.



## The Percentage of Infants in Medicaid Born With Low Birth Weight During SFY 2002 Remained Constant

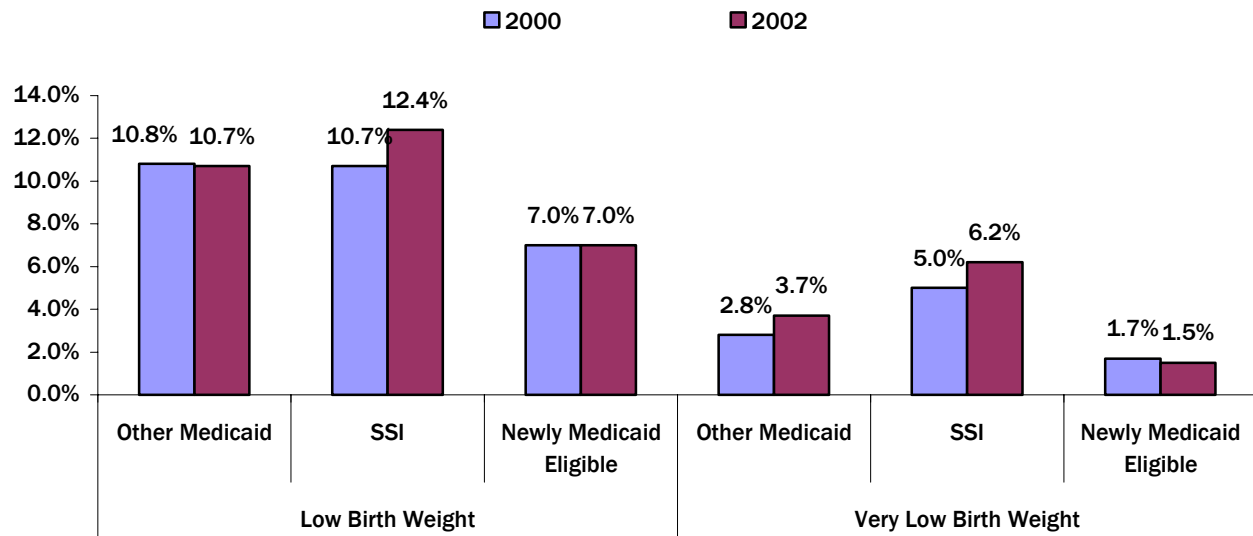
Figure 6 displays the Virginia Medicaid birth weight outcomes for SFY 1998–2002\*. Changes between the overall rates declined marginally between SFY 2000 and SFY 2002.



\*Low birth weight = 1,501 to 2,500 grams; very low birth weight = 1,500 grams or less.

Figure 7 displays the birth weight outcomes for specific Medicaid populations in SFY 2000 and SFY 2002.\* Percentage changes in the SSI group should be interpreted very cautiously because this group is very small. Rates in the Newly Eligible group, which includes 90% of all newborns included in the analysis, were unchanged.

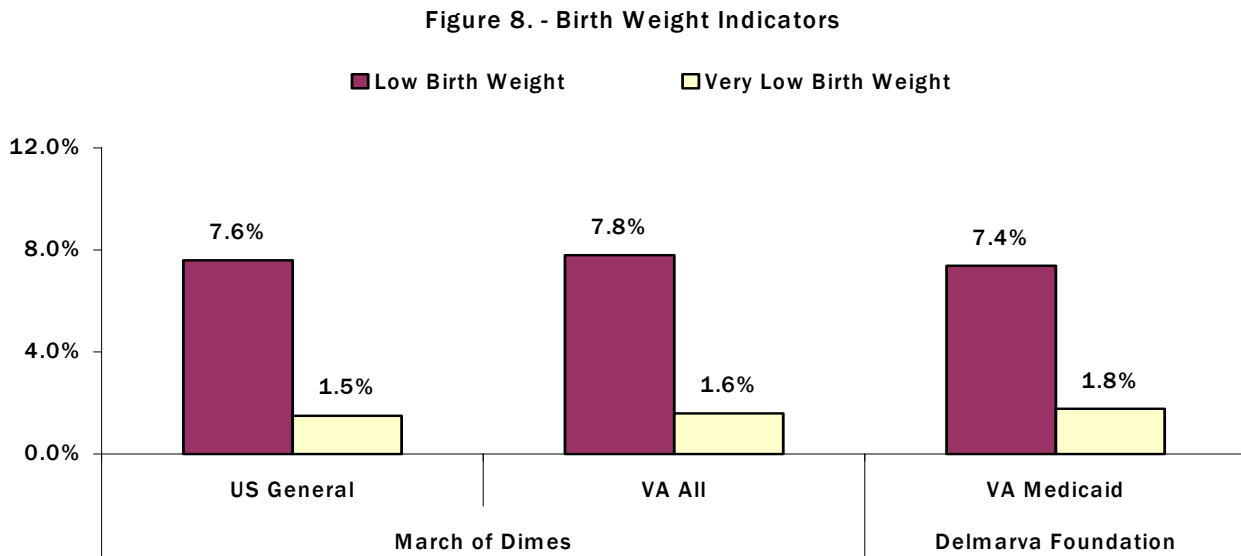
**Figure 7. - Trends in Low and Very Low Birth Weights - Specific Medicaid Populations**



\*Low birth weight = 1,501 to 2,500 grams; very low birth weight = 1,500 grams or less.

## Virginia Medicaid Results for Low and Very Low Birth Weight in SFY 2002 Were Comparable to National and Virginia Statewide Benchmarks\*\*

Figure 8 displays the national and Virginia statewide and Medicaid birth weight results\*. Low birth weight rates for the VA Medicaid population are marginally lower than norms, while very low birth weight rates are marginally higher.



\*Low birth weight = 1,501 to 2,500 grams; very low birth weight = 1,500 grams or less.

\*\* March of Dimes data is from their 2003 Report, but is based on the most current available data, which is from CY 2000.

## Section III

### AT-A-GLANCE - Relationships Between Length of Time in Medicaid, Length of Time in a Medicaid Program, and Initiation of Prenatal Care

#### Medicaid Eligibility and Program Assignment Process for Women Newly Eligible for Medicaid due to Pregnancy

Figure 9 shows the Medicaid eligibility/enrollment process.

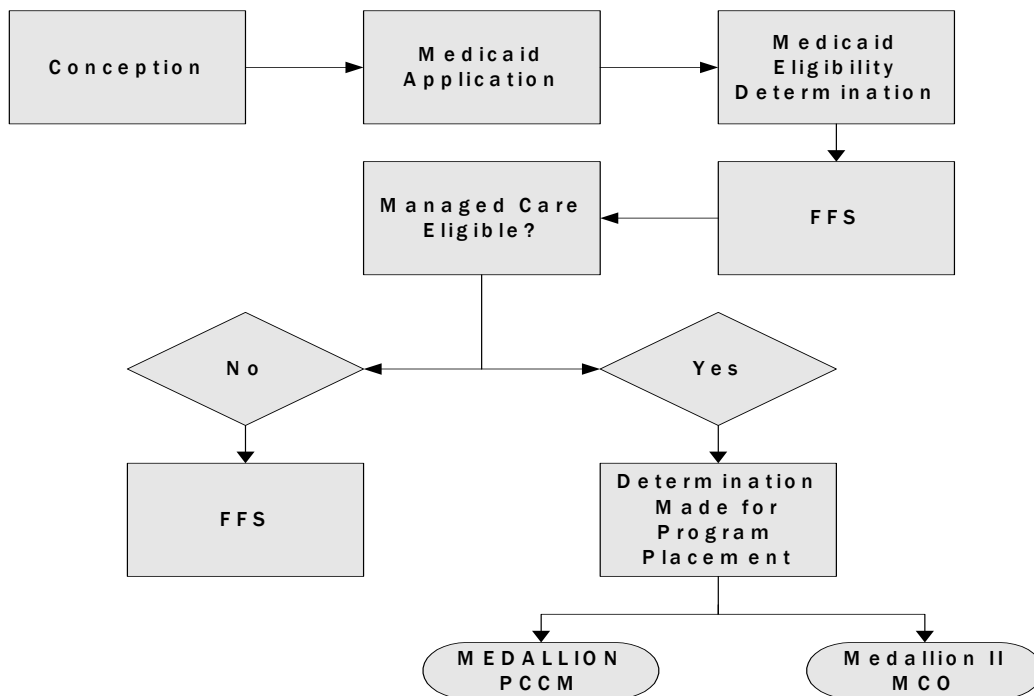


Figure 9 depicts the eligibility and program enrollment process for women new to Medicaid due to pregnancy. A description of the process follows.

Upon eligibility determination, all women are placed in the FFS program. Eligibility may be made retroactive to the date of conception or three months prior to the Medicaid application date, whichever is shortest.

Prenatal care may be initiated at any time in the process after conception (a few women receive no prenatal care and apply for Medicaid after delivery). Women who are eligible for enrollment in a managed care

program are placed in preassignment. During preassignment, they remain in FFS and are asked to select a MEDALLION primary care provider or a Medallion II MCO. Women may remain in preassignment for approximately 30 days before being enrolled in a managed care program. In addition, women enrolled in a Medallion II MCO may change MCOs during the first 90 days of MCO enrollment for any reason.

The administrative factors that may have affected the timing of the initiation of prenatal care delivered to newly eligible women were examined. For the purpose of this study, the program to which a recipient's care is attributed is based on the program in which the recipient was enrolled on the delivery date. This method of program attribution was used because the highest intensity of prenatal care services is generally received during the later stages of the pregnancy, thus this method attributes care to the program that would most likely have provided most of the services. Because recipients may switch programs during the gestational period, programs and providers other than those to which it was attributed may have provided early prenatal care.

Seventy-nine percent of all women in Virginia Medicaid programs during the study period began prenatal care in the first trimester of pregnancy. Most women began prenatal care before becoming eligible for Medicaid and before enrollment in a managed care program.

## Relationship Between Timing of Medicaid Eligibility, Medicaid Program Enrollment and Initiation of Prenatal Care

Ninety percent of women in Medicaid who delivered babies during SFY 2002 were newly eligible for Medicaid due to becoming pregnant.

**Table 1. Study population by Medicaid program and eligibility category**

	<b>FFS</b>	<b>MEDALLION (PCCM)</b>	<b>Medallion II (MCO)</b>	<b>All Program Aggregate</b>
<b>Other Medicaid</b>	<b>47</b>	<b>197</b>	<b>992</b>	<b>1,236 (8.5%)</b>
<b>SSI</b>	<b>25</b>	<b>32</b>	<b>132</b>	<b>189 (1.3%)</b>
<b>Newly Medicaid Eligible</b>	<b>2,690</b>	<b>3085</b>	<b>7,361</b>	<b>13,136 (90.2%)</b>
<b>Medicaid— All Eligibility</b>	<b>2,762 (19%)</b>	<b>3,314 (23%)</b>	<b>8,485 (58%)</b>	<b>14,561 (100%)</b>

**Table 2. Percentage of study population by Medicaid program and eligibility category**

	<b>FFS</b>	<b>MEDALLION (PCCM)</b>	<b>Medallion II (MCO)</b>
<b>Other Medicaid</b>	<b>1.7%</b>	<b>5.9%</b>	<b>11.7%</b>
<b>SSI</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.6%</b>
<b>Newly Medicaid Eligible</b>	<b>97.4</b>	<b>93.1%</b>	<b>86.8%</b>
<b>Total</b>	<b>(100%)</b>	<b>(100%)</b>	<b>(100%)</b>

The percentage of the MEDALLION population that is newly Medicaid eligible rose 4% from SFY 2000 while the percentage in Medallion II rose almost 7%. Because a large majority of women included in this study were newly Medicaid eligible, analyses were performed to investigate how eligibility and enrollment processes may influence the timing of care.

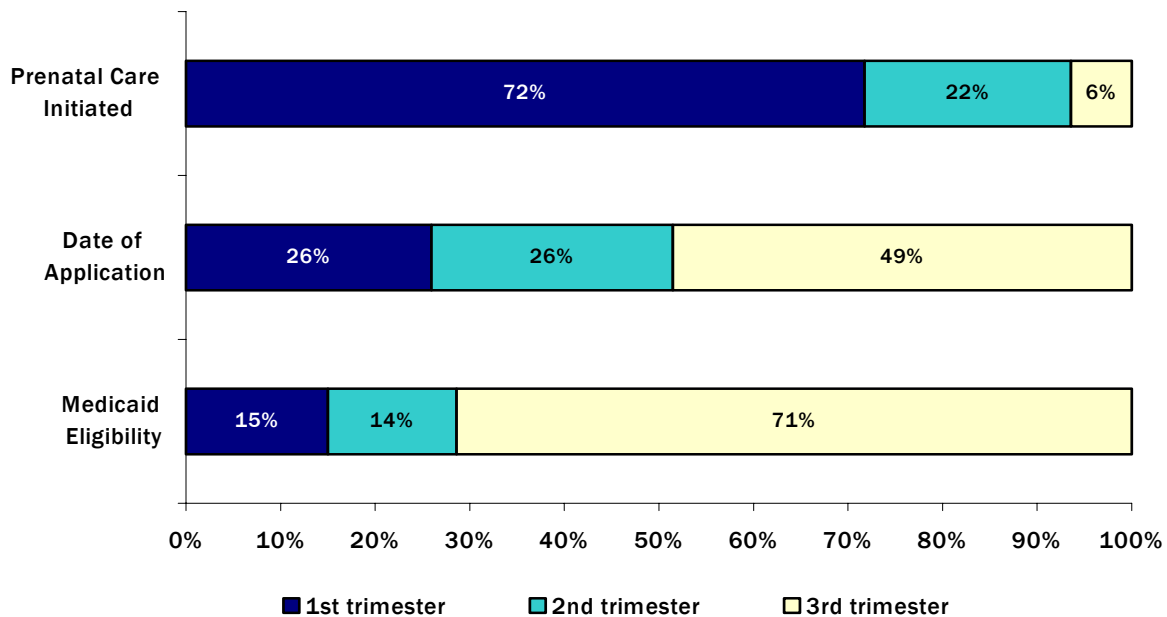
## Fee-for-Service

Women in FFS began prenatal care and applied for Medicaid later in pregnancy than women in MEDALLION and Medallion II. Of the women who were in the FFS program at the time of delivery,

- 72% began prenatal care during the first trimester of pregnancy.
- 26% were in the first trimester of pregnancy when they applied for Medicaid.
- 15% were in the first trimester when they were determined eligible for Medicaid (some were retroactive).
- Because enrollment in the PCCM or an MCO requires more time, lower rates of care and poorer outcomes observed in the fee-for-service plan may be explained by the fact that fee-for-service participants enter Medicaid closer to when they give birth.

Figure 10 shows the time analysis of eligibility/enrollment process for newly Medicaid eligible pregnant women in FFS during SFY 2002.

**Figure 10. - FFS**



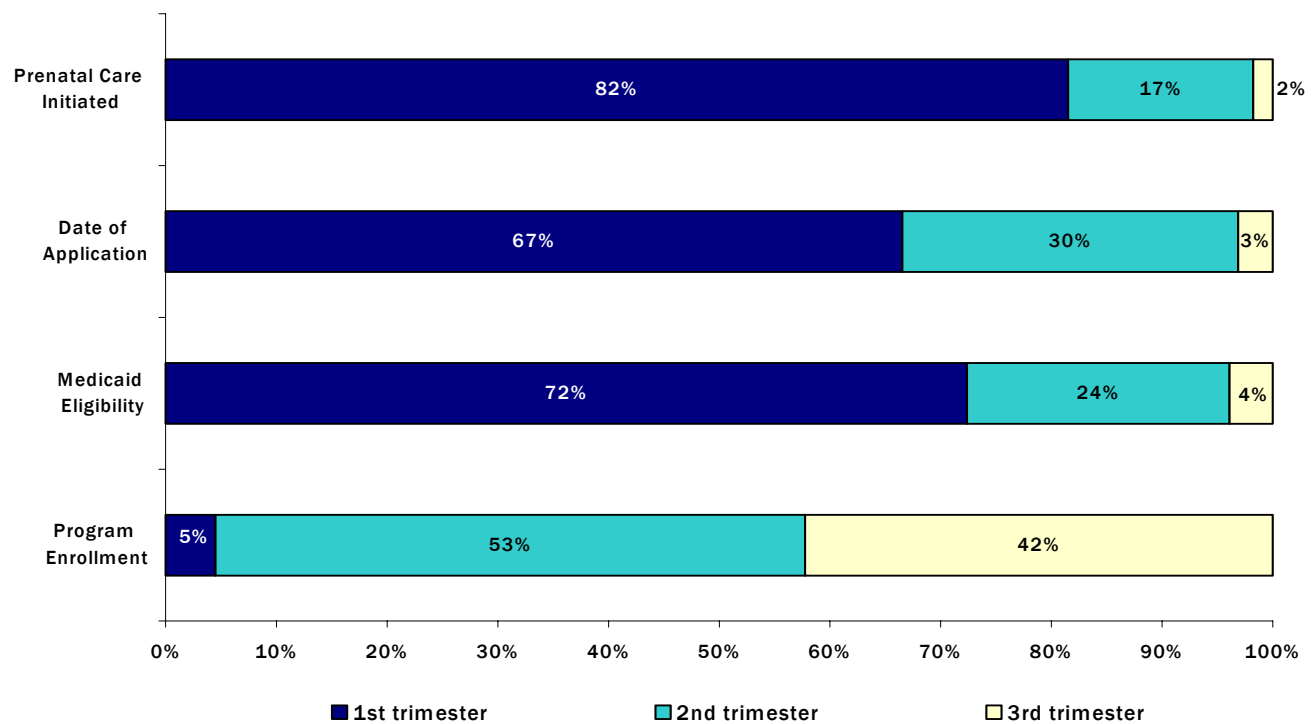
## MEDALLION PCCM

Of the women in the PCCM program at the time of delivery,

- 82% began care in the first trimester.
- 67% were in the first trimester of pregnancy when they applied for Medicaid.
- 72% were in the first trimester when they became Medicaid eligible (including some who became eligible retroactively).
- Only 5% were in the first trimester when they enrolled in the PCCM program.
- 42% were in the third trimester when they enrolled in the PCCM program. This reflects an 11% decrease from SFY 2000.

Figure 11 shows the time analysis of eligibility/enrollment process for newly Medicaid eligible pregnant women in PCCM during SFY 2002.

Figure 11. - PCCM



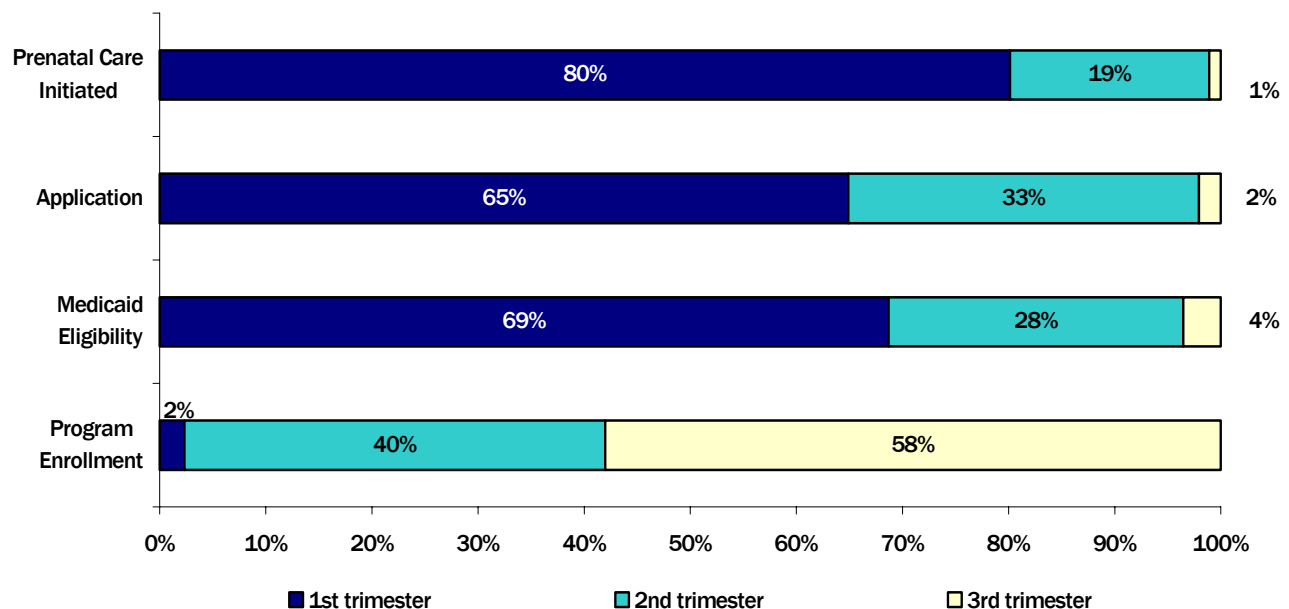
## Medallion II MCO

Of the women in Medallion II MCOs at the time of delivery,

- 79% began care in the first trimester.
- 61% were in the first trimester when they applied for Medicaid.
- 64% were in the first trimester when they became Medicaid eligible (some became eligible retroactively).
- Only 2% were in the first trimester when they enrolled in an MCO.
- 49% were in the third trimester when they enrolled in an MCO. The number is down from 58% in SFY 2000.

Figure 12 shows the time analysis of eligibility/enrollment process for newly Medicaid eligible pregnant women in MCOs during SFY 2002.

**Figure 12. MCOs**

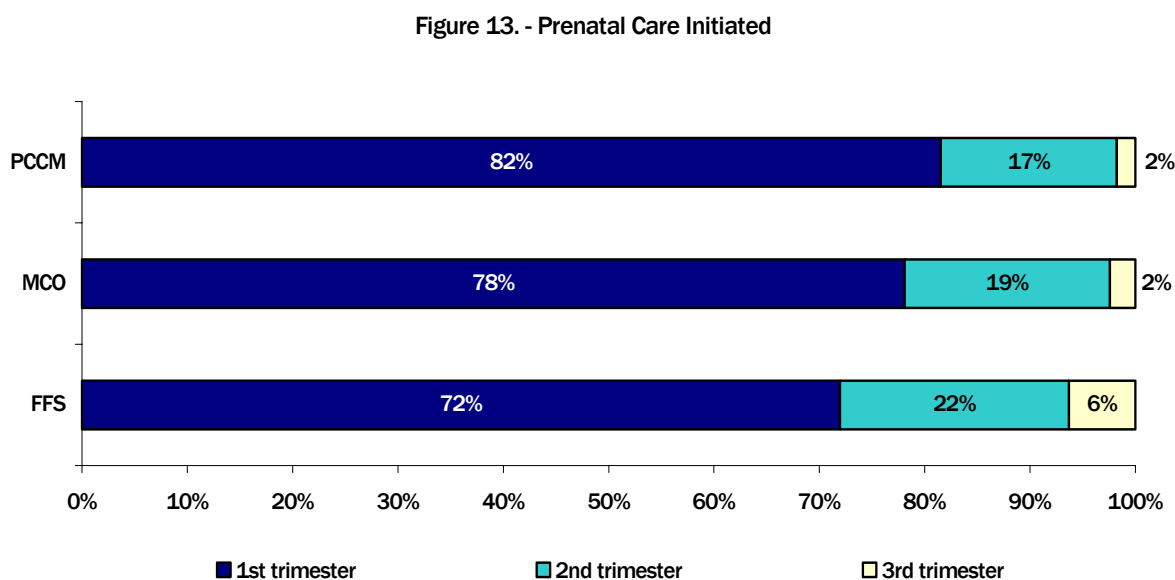


## Comparison of Programs—Time Analysis

Figures 13 through 15 display comparative time analyses of each milestone by Medicaid program. In general, rates for the managed care programs are comparable. Rates for the FFS are below those of the managed care programs.

While fewer women in the FFS program initiated prenatal care in the first trimester, this is probably because fewer women in the FFS program were eligible for Medicaid in the first trimester.

Figure 13 shows the time analysis of initiation of prenatal care for newly Medicaid eligible women by program for SFY 2002.

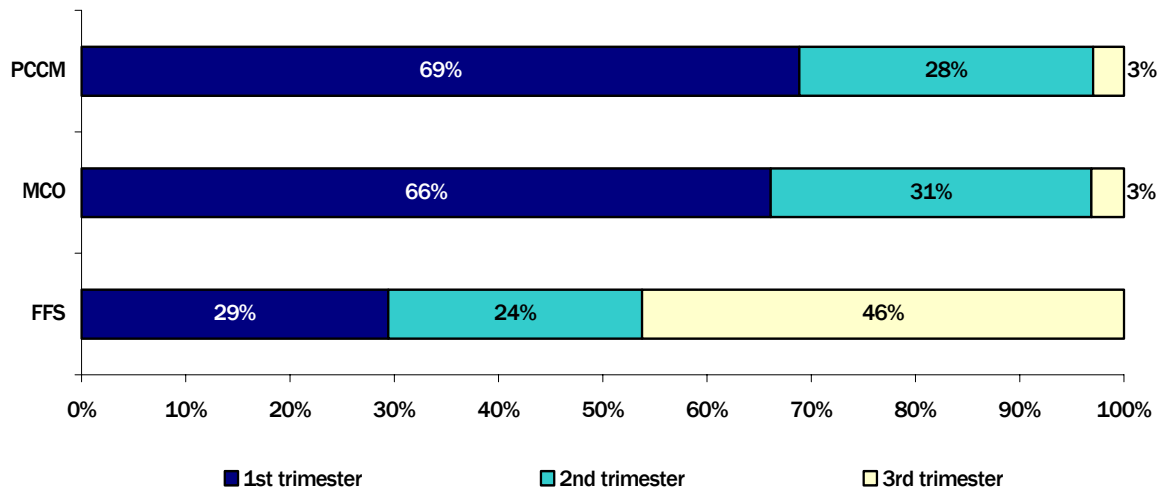


The majority of the women in the FFS program did not apply for Medicaid until the third trimester. On the other hand, the majority of women in managed care applied for Medicaid while in the first trimester.

Women who applied for Medicaid late in pregnancy may have delivered while still in FFS, during the preassignment process, although they later became eligible for enrollment in managed care.

Figure 14 shows the time analysis of Medicaid application by newly Medicaid eligible women by program for SFY 2002.

Figure 14. - Date of Application

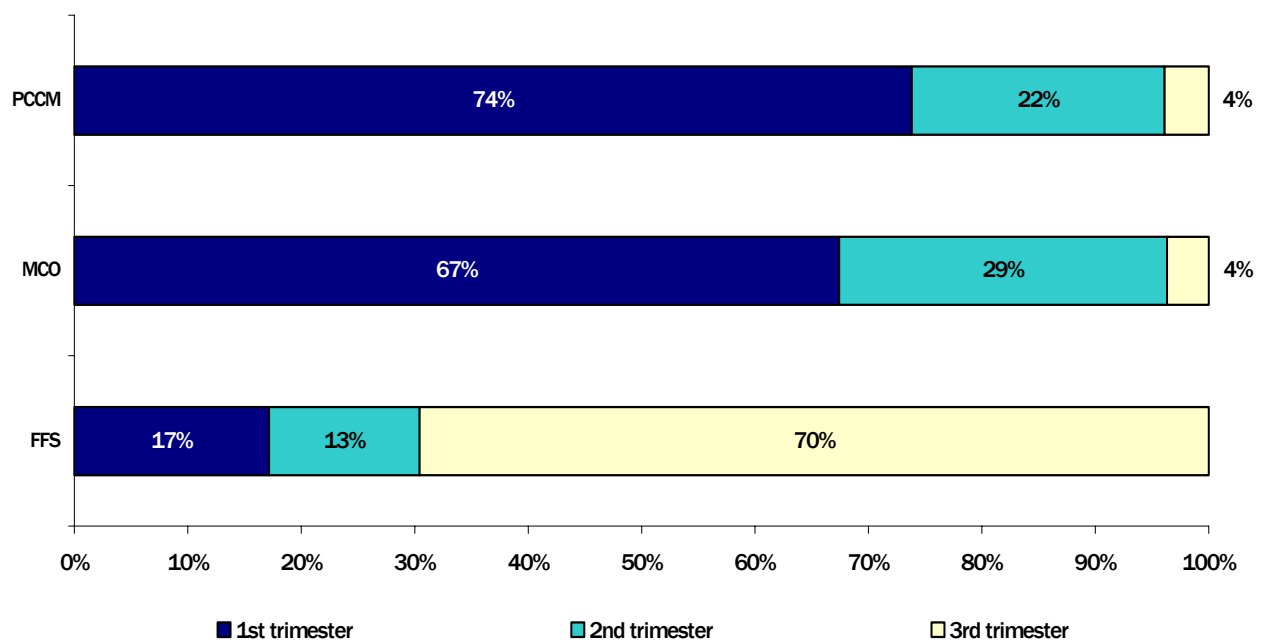


The majority of the women in the FFS program were determined to be Medicaid eligible in the third trimester, due to the fact that they were already in the late second or third trimester at the time of application for Medicaid.

Some women that applied for Medicaid late in pregnancy and were deemed managed care eligible delivered while still in the preassignment process, before they could be assigned to a managed care program and plan. Therefore, they were still in FFS at the time of delivery.

Figure 15 shows the time analysis of Medicaid eligibility for newly Medicaid eligible women by program for SFY 2002\*.

Figure 15. - Medicaid Eligibility

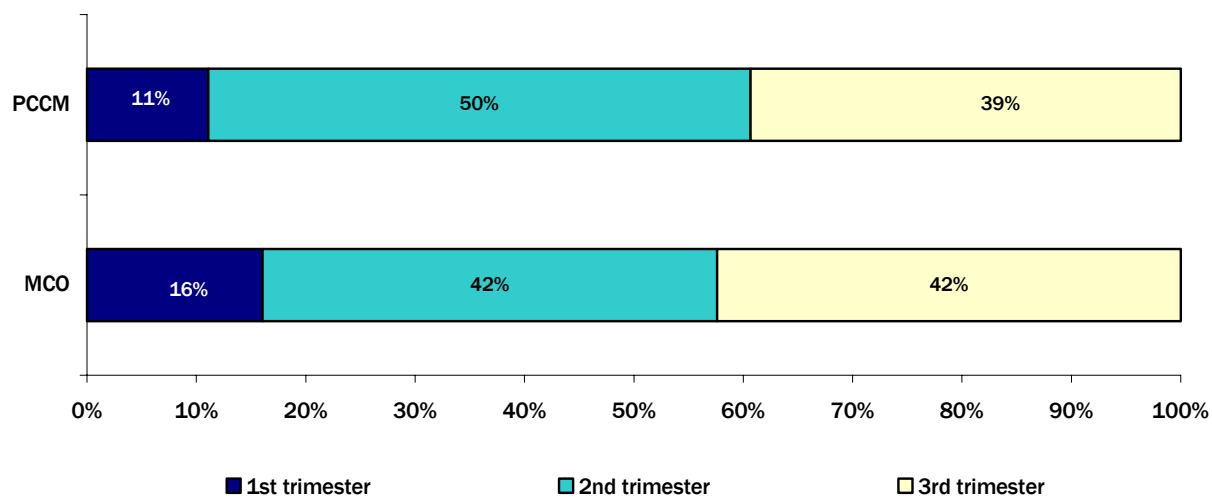


\*The percentage of women in PCCM and MCOs who were in the first trimester when determined eligible for Medicaid is greater than the percentage of women in the first trimester at time of application (Figure 14), due to retroactive eligibility.

The proportion of women in each trimester of pregnancy at program enrollment for the PCCM and MCO programs is comparable. The length of time spent in preassignment resulted in late managed care program enrollment. However, the percent enrolled for both programs in the first trimester has increased substantially from SFY 2000, when 3% of those in the PCCM were enrolled in the first trimester and 44% were enrolled in the second trimester, and when 2% of those in the MCO program were enrolled in the first trimester and 40% were enrolled in the second trimester.

Figure 16 shows the time analysis of managed care program enrollment by newly Medicaid eligible women for SFY 2002.

**Figure 16. - Program Enrollment**



### Newly Medicaid Eligible Pregnant Women Received Care Within Four Weeks of Enrollment in the Medicaid Program

A large majority of women who enrolled in a Medicaid program due to their pregnancy received prenatal care within four weeks of their program enrollment. The overall percentage of women who received care within this time period dropped slightly from 98% in SFY 2000 to 96% in SFY 2002. Primarily this slight reduction was because the rates for MEDALLION and Medallion II were both 99% in SFY 2000.

Table 3. Initiation of care within 4 weeks of program enrollment by program type for newly eligible Medicaid recipients that gave birth during SFY 2002.

**Table 3.**

	<b>FFS, % (N)</b>	<b>MEDALLION (PCCM), % (N)</b>	<b>Medallion II (MCO), % (N)</b>	<b>Medicaid All Program Aggregate,% (N)</b>
<b>Newly Medicaid Eligible</b>	<b>96% (2,646)</b>	<b>97% (3,224)</b>	<b>95% (8,053)</b>	<b>96% (13,923)</b>

## Section IV

### AT-A-GLANCE - Demographic Characteristics of Study Population

#### Race Distribution

The racial distribution of births in the FFS program has shifted substantially from SFY 2000. In that period, 60% of these births were to white women and 32% were to African American women. Analyses combined all other minorities, including Hispanics into an “Other” category that accounted for 9% of FFS births. In SFY 2002, Hispanic women accounted for 30% of births in the FFS group, while the percentages to white and African American women dropped to 38% and 24%, respectively. Hispanic women tended to apply for Medicaid later in their pregnancies than white women, resulting in a concentration of Hispanic women within the FFS program.

**Table 4. Racial distribution by program for Virginia Medicaid recipients that gave birth during SFY 2002**

Population	White	African American	Asian	Hispanic	Other
<b>All Medicaid (N=14,561)</b>	<b>51%</b>	<b>38%</b>	<b>3%</b>	<b>8%</b>	<b>0%</b>
<b>FFS (N=2,762)</b>	<b>38%</b>	<b>24%</b>	<b>7%</b>	<b>30%</b>	<b>1%</b>
<b>MEDALLION (N=3,314)</b>	<b>78%</b>	<b>18%</b>	<b>2%</b>	<b>2%</b>	<b>0%</b>
<b>Medallion II (N=8,485)</b>	<b>45%</b>	<b>51%</b>	<b>2%</b>	<b>2%</b>	<b>0%</b>

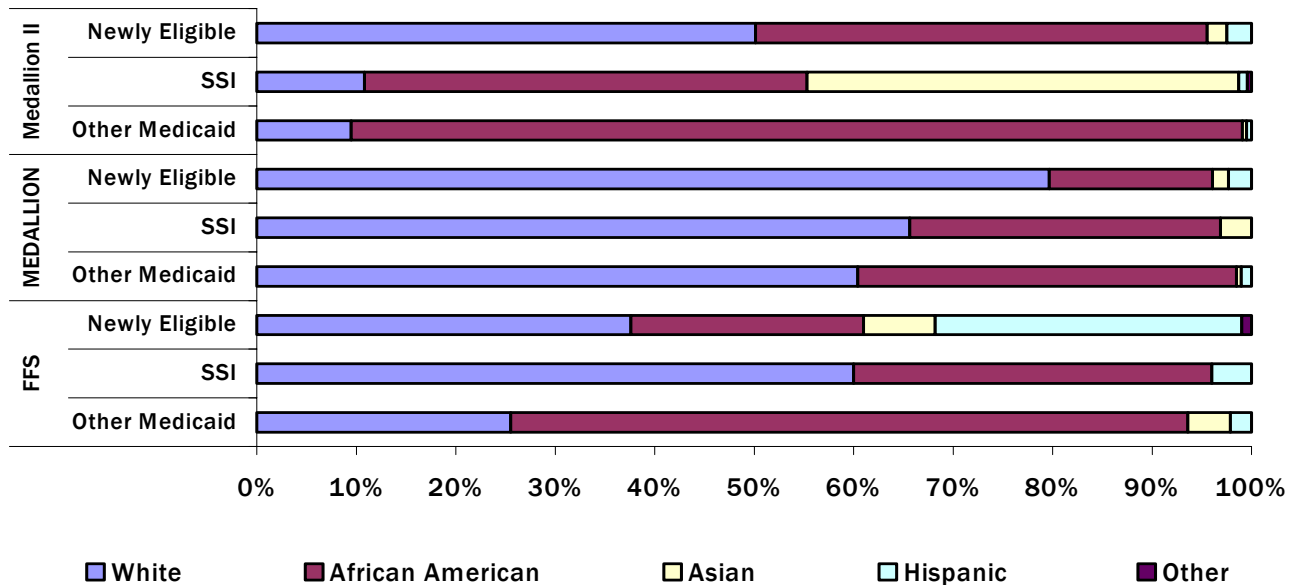
The overall percentage of births to white women dropped from 57% in SFY 2000 to 51% in SFY 2002, but the percentage of births to African-American women remained constant at 38%. The percentage of births to women from other minorities, including Hispanics, increased from 4% in SFY 2000 to 11% in SFY 2002. Data from the Virginia Department of Health for 2002 indicates that 69% of VA live births were to whites, while 23% were to African-Americans and 8% were to other minorities (Virginia Department of Health Statistics: <http://www.vdh.state.va.us/HealthStats/BirthsByRace02.pdf>)

Table 5. Change in racial distribution of Virginia Medicaid recipients that gave birth during SFY 1998–2002.<sup>5</sup>

Year	White	African American	All Others
1998	51%	42%	7%
1999	49%	45%	6%
2000	57%	38%	4%
2002	51%	38%	11%

Figure 17 shows the racial distribution by program type and eligibility criteria for Virginia Medicaid recipients that gave birth during SFY 2002.

Figure 17. - Race



<sup>5</sup> Data from 1998 and 1999 provided by George Mason University.

## Age Distribution

Of the women in Medicaid who gave birth during the study period, 18% were age 19 or younger. In comparison, only 9.5% of all live births in VA in CY 2002 were to women in this age group

(Virginia Department of Health, Virginia Department of Health Statistics:

<http://www.vdh.state.va.us/HealthStats/BirthsByRace02.pdf> and

<http://www.vdh.state.va.us/HealthStats/TeenPregAge02.pdf>).

The FFS program had a higher percentage of births in the 30 and over age group.

**Table 6. Age distribution by program for Virginia Medicaid recipients that gave birth during SFY 2002**

Population	19 and Under	20–29	30 and Over
<b>Total Medicaid</b> (N=14,561)	<b>18%</b>	<b>65%</b>	<b>17%</b>
<b>FFS</b> (N=2,762)	<b>20%</b>	<b>56%</b>	<b>25%</b>
<b>MEDALLION</b> (N=3,314)	<b>19%</b>	<b>65%</b>	<b>16%</b>
<b>Medallion II</b> (N=8,485)	<b>18%</b>	<b>68%</b>	<b>14%</b>

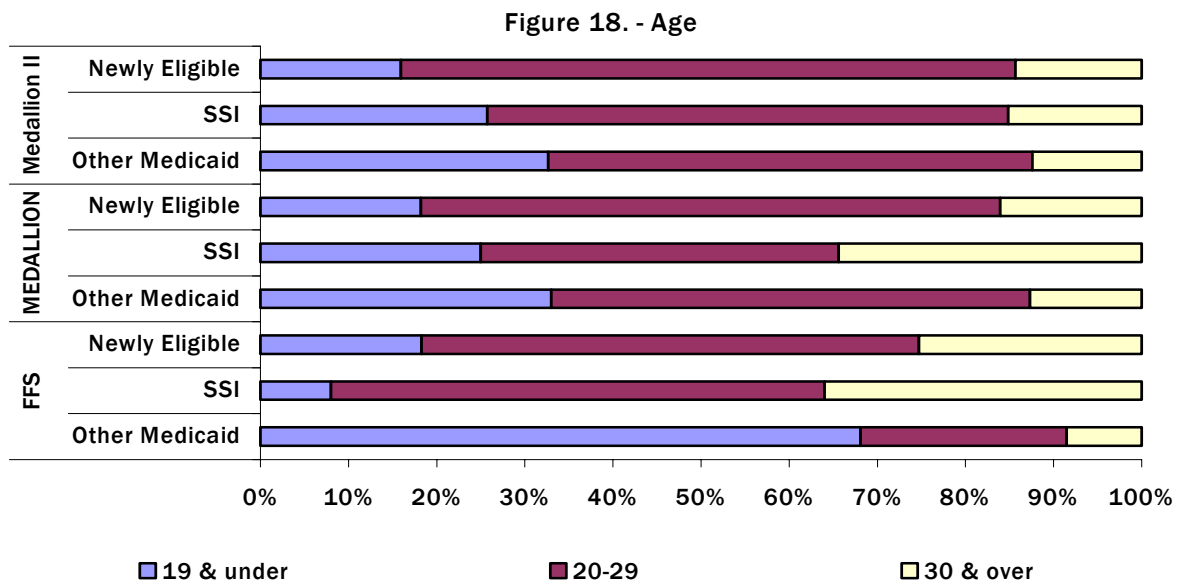
There continues to be a reduction in the percentage of Medicaid recipients giving birth that were 19 years old or younger. This percentage has dropped from a peak of 26% in 1999 to 18% in SFY 2002. The primary reason for the changing percentage is the significant increase in the number of births to women ages 20-29. While there were 29 fewer births in the 19 and under category in SFY 2002 than in SFY 2000 (2,693 vs 2,722), there were 918 more births in the 20-29 age group (9,448 vs 8,531). Births in the 30 and over age group also increased somewhat from 2,365 to 2,420. Across the FFS, MEDALLION and Medallion II programs, consistent majorities of women newly eligible to Medicaid are in the 20-29 age group.

**Table 7. Age distribution of Virginia Medicaid recipients that gave birth during SFY 1998–2002 <sup>6</sup>**

Year	19 and Under	20–29	30 and Over
<b>1998</b>	<b>25%</b>	<b>61%</b>	<b>14%</b>
<b>1999</b>	<b>26%</b>	<b>59%</b>	<b>15%</b>
<b>2000</b>	<b>20%</b>	<b>63%</b>	<b>17%</b>
<b>2002</b>	<b>18%</b>	<b>65%</b>	<b>17%</b>

<sup>6</sup> Results from 1998 and 1999 provided by George Mason University.

Figure 18 shows the age distribution by program type and eligibility criteria for Virginia Medicaid recipients that gave birth during SFY 2002



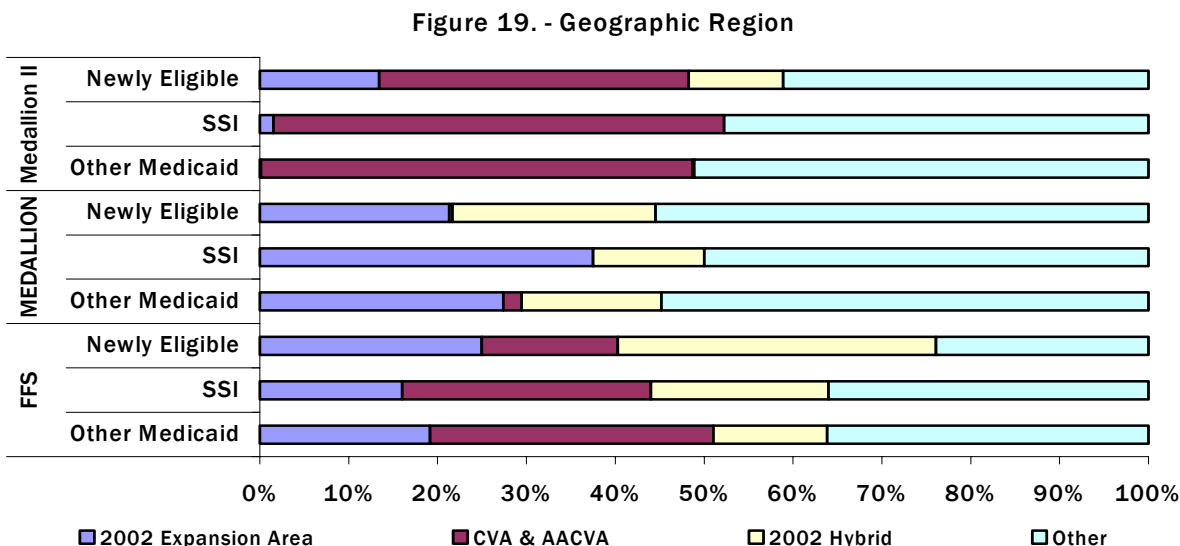
## Geographic Distribution

The SFY 2002 study population was distributed among the four current managed care areas. Appendix A provides a map of these areas

Table 8. Distribution of Medicaid study population by geographic areas

Population	2002 MCO Expansion	Tidewater, CVA & AACVA (MCO)	2002 Hybrid (MCO/PCCM)	Other Geographic Areas
Total Medicaid	16%	24%	17%	42%
FFS	25%	16%	35%	24%
MEDALLION	22%	0%	22%	55%
Medallion II	12%	37%	9%	42%

Figure 19. Geographic distribution by program type and eligibility criteria for Virginia Medicaid recipients that gave birth during SFY 2002



CVA= Central Virginia; AACVA= Areas adjacent to Central Virginia

## Detailed Outcomes

The tables in the following section provide detailed information on study outcomes, including

- Initiation of care in the first trimester of pregnancy.
- Adequacy and timeliness of prenatal care based on the following Prenatal Care Indices:
  - ◆ Initiation of care within four months of conception.
  - ◆ Completion of *adequate* and *adequate plus* number of expected prenatal care visits.
  - ◆ Composite score—a combination of the scores for initiation of care (timeliness) and number of visits (adequacy of care).
- Low birth weight (1,501 to 2,500 grams).
  - ◆ Very low birth weight (1,500 grams or less).

Outcomes are provided by Medicaid program, eligibility category, geographic area, race, and individual MCO.

Seventy-seven percent of the women who received prenatal care services through Medicaid programs were newly Medicaid eligible because of pregnancy.

For purposes of this assessment, care was attributed to the Medicaid program and/or MCO a woman was associated with at the time of delivery, regardless of initial care delivery system. Due to late program enrollment, attributions to MEDALLION, Medallion II, or an MCO regarding the study outcomes must be made with extreme caution.

## White Women Started Care Earlier and had More Adequate Care and Fewer Low and Very Low Birth Weight Babies

Table 9. Racial group analysis of Medicaid recipients that gave birth in SFY 2002: care in first trimester, adequacy of care (APNCU Composite Index), and low and very low birth weight

Indicator	White, % (N)	African American, % (N)	Asian, % (N)	Hispanic % (N)
Initiation of Care in First Trimester	82% (6,088)	74% (4,125)	68% (270)	61% (669)
Adequate Care	82% (6,033)	73% (4,046)	68% (253)	57% (599)
Low Birth Weight	6.1% (459)	9.7% (549)	5.7% (23)	5.2% (57)
Very Low Birth Weight	1.2% (91)	2.6% (146)	2.2% (9)	1.3% (14)

## Fewer Women in FFS and “Other” Categories Initiated Prenatal Care in the First Trimester

Table 10. Initiation of care within first trimester by program type and eligibility criteria for Medicaid recipients that gave birth during SFY 2002

	FFS, % (N)	MEDALLION* (PCCM), % (N)	Medallion II* (MCO), % (N)	Medicaid All Program Aggregate, % (N)
Other Medicaid	74% (35)	78% (154)	71% (703)	72% (892)
SSI†	84% (21)	81% (26)	79% (104)	80% (151)
Newly Medicaid Eligible	70% (1,886)	81% (2,506)	78% (5,768)	77% (10,160)
Medicaid—All Eligibility	70% (1,942)	81% (2,686)	78% (6,575)	77% (11,203)

\*Majority of women enrolled in program during third trimester.

†The variability in these rates may be partially attributable to the low numbers in the subcategories.

### Fewer Women in FFS Initiated Prenatal Care Within Four Months of Conception

Table 11. Percentage of mothers receiving adequately initiated prenatal care (APNCU Care Initiation Index) by program type and eligibility criteria during SFY 2002

	FFS, % (N)	MEDALLION (PCCM), % (N)	Medallion II (MCO), % (N)	Medicaid All Program Aggregate, % (N)
Other	85%	86%	80%	81%
Medicaid	(39)	(169)	(787)	(995)
SSI*	88%	94%	88%	89%
	(22)	(30)	(112)	(164)
Newly Medicaid	81%	90%	89%	88%
Eligible	(2,123)	(2,766)	(6,511)	(11,400)
Medicaid—	82%	90%	88%	87%
All Eligibility	(2,184)	(2,965)	(7,410)	(12,559)

\*The variability in these rates may be partially attributable to the low numbers in the subcategories.

### Fewer Women in FFS Received Expected Number of Prenatal Care Visits

Table 12. Percentage of mothers receiving all expected visits (APNCU Received Services Index) during entire pregnancy in SFY 2002

	FFS, % (N)	MEDALLION* (PCCM), % (N)	Medallion II* (MCO), % (N)	Medicaid All Program Aggregate, % (N)
Other	80%	87%	79%	81%
Medicaid	(37)	(172)	(782)	(991)
SSI†	84%	78%	81%	81%
	(21)	(25)	(104)	(150)
Newly Medicaid	81%	91%	86%	86%
Eligible	(2,099)	(2,786)	(6,336)	(11,221)
Medicaid—	81%	90%	86%	86%
All Eligibility	(2157)	(2983)	(7,222)	(12,362)

\*Majority of women enrolled in program during third trimester.

†The variability in these rates may be partially attributable to the low numbers in the subcategories.

## Women in FFS had Lower Composite Scores than Women in MEDALLION and Medallion II

Table 13. Percentage of mothers receiving adequate prenatal care (APNCU Composite Index) by program type and eligibility criteria for Virginia Medicaid recipients that gave birth during SFY 2002

	FFS, % (N)	MEDALLION (PCCM), % (N)	Medallion II (MCO), % (N)	Medicaid All Program Aggregate, % (N)
Other Medicaid	70% (32)	79% (155)	67% (656)	69% (843)
SSI*	76% (19)	75% (24)	73% (93)	74% (136)
Newly Medicaid Eligible	68% (1,771)	83% (2,539)	78% (5,687)	77% (9,997)
Medicaid— All Eligibility	68% (1,822)	82% (2,718)	76% (6,436)	76% (10,976)

\*Majority of women enrolled in program during third trimester.

## Medicaid Program and Reason for Eligibility had Little Association with Birth Weight Outcomes

- The “Other” and SSI categories had somewhat higher rates of low birth weight babies than the Newly Medicaid Eligible group. While the total number of low birth weight births is under 160, further examination of the causes and outcomes of the increased rate of low weight births is warranted.
- There are minimal differences between FFS, MEDALLION and the Medallion II program with respect to the percentage of low and very low birth weight babies.

Note: Because 90% of the population assessed in this report was newly Medicaid eligible (because of pregnancy), timely initiation of care must occur prior to Medicaid eligibility and managed care program enrollment.

Table 14. Rate of low birth weight (1,501–2,500 grams) by program type and eligibility during SFY 2002\*

	FFS, % (N)	MEDALLION (PCCM), % (N)	Medallion II (MCO), % (N)	Medicaid All Program Aggregate, % (N)
Other Medicaid	14.9% (7)	8.5% (17)	10.9% (110)	10.7% (134)
SSI†	23% (6)	3.1% (1)	12.6% (17)	12.4% (24)
Newly Medicaid Eligible	7.9% (217)	6.1% (189)	7.1% (526)	7.0% (932)
Medicaid— All Eligibility	8.2% (230)	6.2% (207)	7.6% (653)	7.4% (1,090)

\*Reported numbers represent the number of low birth weight babies in the category. This differs from last year's study which reported the total number of cases on which the percentage figure was based.

†The variability in these rates may be partially attributable to the low numbers in the subcategories.

Table 15. Rate of very low birth weight (1,500 grams and less) by program type and eligibility criteria during SFY 2002\*

	FFS, % (N)	MEDALLION (PCCM), % (N)	Medallion II (MCO), % (N)	Medicaid All Program Aggregate, % (N)
Other Medicaid	0% (0)	3.0% (6)	4.0% (40)	3.7% (46)
SSI†	7.7% (2)	3.1% (1)	6.7% (9)	4.6% (12)
Newly Medicaid Eligible	2.2% (61)	1.3% (39)	1.4% (103)	1.5% (203)
Medicaid— All Eligibility	2.2% (63)	1.4% (46)	1.8% (152)	1.8% (261)

\*Reported numbers represent the number of low birth weight babies in the category. This differs from last year's report, which reported the total number of cases on which the percentage figure was based.

†The variability in these rates may be partially attributable to the low numbers in the subcategories.

## Geographic Analysis of Outcomes

The differences between geographic areas on each of the measures of prenatal care reported below are small and very similar to those reported for SFY 2000. The largest percentage change was for the percentage of persons in the Tidewater region, which dropped from 75% to 70%.

Table 16. Geographic analysis of prenatal indicators: care within first trimester, Adequacy of Care Composite Index, and low and very low birth weight for Medicaid recipients that gave birth during SFY 2002. (Appendix A includes a map and table delineating the counties in these regions.)

Indicator	2001 Expansion Areas, % (N)	Tidewater, CVA/ AACVA, % (N)	Hybrid MEDALLION- Medallion II, % (N)	Other, % (N)
Initiation of Care in First Trimester	71% (1,689)	78% (2,790)	75% (1,872)	80% (6,098)
Adequate Care	73% (1,736)	70% (2,474)	72% (1,743)	83% (5,023)
Low Birth Weight	6.7% (164)	9.1% (328)	5.7% (144)	7.3% (454)
Very Low Birth Weight	1.9% (45)	2.1% (75)	1.5% (38)	1.7% (103)

## Outcomes by MCO

Table 17. Care within first trimester, adequacy of care (APNCU Composite Index), low and very low birth weight, and population description by MCO for Virginia SFY 2002.\*

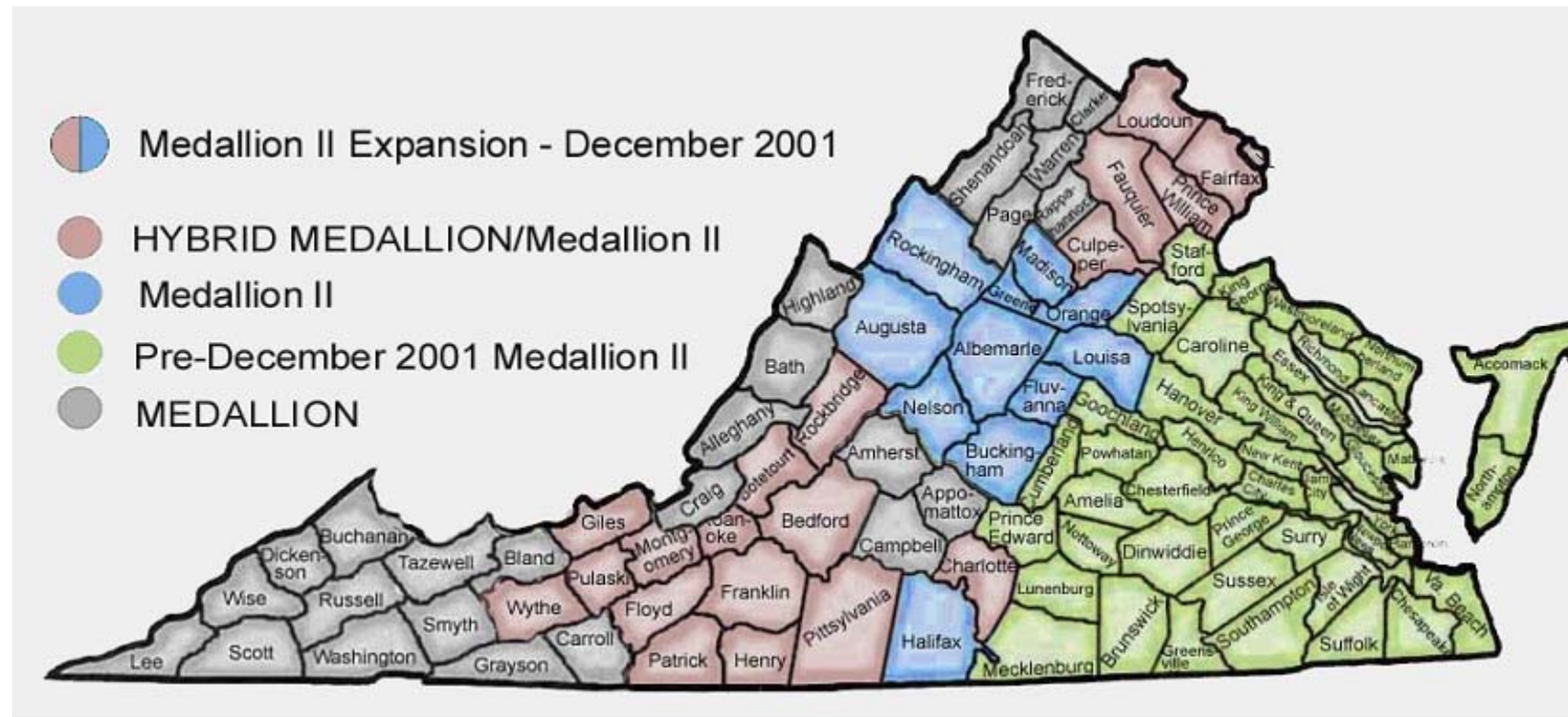
Indicator	MCO 1 % (N)	MCO 2 % (N)	MCO 3 % (N)	MCO 4 % (N)	MCO 5 % (N)	MCO 6† % (N)	MCO 7 % (N)
Initiation of Care in First Trimester	73% (450)	83% (795)	82% (444)	78% (2561)	79% (425)	67% (332)	77% (1568)
Adequate Care	79% (485)	72% (696)	85% (461)	77% (2534)	73% (393)	65% (321)	76% (1546)
Low Birth Weight	8% (48)	8% (82)	7% (39)	8% (252)	8% (46)	5% (27)	8% (159)
Very Low Birth Weight	2% (12)	2% (20)	1% (7)	2% (61)	2% (10)	1% (3)	2% (39)
Enrolled in First Trimester*	23% (139)	24% (229)	16% (84)	17% (566)	16% (87)	0% (1)	13% (257)
Enrolled in Second Trimester*	42% (259)	39% (379)	46% (247)	45% (1484)	43% (231)	28% (140)	39% (786)
Enrolled in Third Trimester*	35% (219)	37% (356)	39% (209)	38% (1241)	41% (220)	72% (357)	49% (994)
African American	63% (389)	55% (528)	54% (294)	56% (1827)	52% (282)	29% (146)	42% (854)
Age 19 and Under	19% (118)	19% (186)	17% (93)	23% (567)	23% (126)	12% (61)	19% (381)
Newly Eligible	80% (495)	78% (753)	88% (476)	86% (2838)	86% (464)	100% (498)	90% (1837)

\* Because one MCO included in the SFY 2000 report no longer participates and one new MCO has been added to the program since then, the MCO numbers reported above do not refer to the same MCOs that they referred to in the SFY 2000 report. DMAS has been provided with keys for both years.

† MCO 6 began enrolling members during the study period. This explains why this MCO had no persons enrolled in the first trimester and 72% enrolled in the third trimester.

## Appendix A - MAPS AND REGION CLASSIFICATIONS

## Geographic Regions



City/County	Tidewater	Areas Adjacent to Tidewater	Central Virginia	Areas Adjacent to Central Virginia	2001 Expansion Areas	MEDALLION-Medallion II Hybrid
Accomack County			X			
Albermarle County					X	
Alexandria City					X	
Alleghany						
Amelia County			X			
Amherst County						
Appomattox County						
Arlington County					X	
Augusta County					X	
Bath County						
Bedford City					X	X
Bedford County					X	X
Blacksburg					X	X
Bland County						
Botetourt County					X	X
Bristol City						
Brunswick County			X			
Buchanan County						
Buckingham County					X	
Buena Vista City					X	
Campbell County						
Caroline County				X		
Carroll County						
Charles City County			X			
Charlotte County					X	
Charlottesville City					X	
Chesapeake City	X					
Chesterfield County			X			
Christiansburg					X	X

City/County	Tidewater	Areas Adjacent to Tidewater	Central Virginia	Areas Adjacent to Central Virginia	2001 Expansion Areas	MEDALLION-Medallion II Hybrid
Clarke County						
Clifton Forge City						
Colonial Heights City			X			
Covington City						
Craig County						
Culpepper County					X	
Cumberland County				X		
Danville City					X	
Dickerson County						
Dinwiddie County			X			
Emporia City			X			
Essex County			X			
Fairfax County / Vienna					X	X
Fairfax City					X	X
Falls Church City					X	
Fauquier County					X	X
Floyd County					X	X
Fluvanna County					X	
Franklin City			X			
Franklin County					X	X
Frederick County						
Fredericksburg City				X		
Front Royal						
Galax City						
Giles County					X	
Gloucester County		X				
Goochland County			X			
Grayson County						
Greene County					X	
Greensville County			X			

City/County	Tidewater	Areas Adjacent to Tidewater	Central Virginia	Areas Adjacent to Central Virginia	2001 Expansion Areas	MEDALLION-Medallion II Hybrid
Halifax County					X	
Hampton City	X					
Hanover County			X			
Harrisonburg City					X	
Henrico County			X			
Henry County					X	X
Herndon					X	X
Highland County						
Hopewell City			X			
Isle of Wight County		X				
James City County		X				
King and Queen County			X			
King George County				X		
King William County			X			
Lancaster County			X			
Lee County						
Leesburg					X	X
Lexington City					X	
Loudoun County					X	X
Louisa County					X	
Lunenburg County				X		
Lynchburg City						
Madison County					X	
Manassas City					X	
Manassas Park City					X	
Martinsville City					X	
Mathews County			X			
Mecklenburg County				X		
Middlesex County				X		
Montgomery County					X	X

City/County	Tidewater	Areas Adjacent to Tidewater	Central Virginia	Areas Adjacent to Central Virginia	2001 Expansion Areas	MEDALLION-Medallion II Hybrid
Nelson County					X	
New Kent County				X		
Newport News City	X					
Norfolk City	X					
Northhampton County				X		
Northumberland				X		
Norton City						
Nottoway County				X		
Orange County					X	
Luray (Page (County)						
Patrick County					X	X
Petersburg City			X			
Pittsylvania County					X	
Poquoson City	X					
Portsmouth City	X					
Powhatan County			X			
Prince Edward County			X			
Prince George County			X			
Prince William County					X	X
Pulaski City					X	X
Pulaski County					X	X
Radford City					X	
Rappahannock County						
Richmond City			X			
Richmond County			X			
Roanoke City					X	
Roanoke County					X	X
Rockbridge County					X	X
Rockingham County					X	
Russell County						

City/County	Tidewater	Areas Adjacent to Tidewater	Central Virginia	Areas Adjacent to Central Virginia	2001 Expansion Areas	MEDALLION-Medallion II Hybrid
Salem City					X	
Scott County						
Shenandoah County						
Smyth County						
Southampton County			X			
Spotsylvania County				X		
Stafford County				X		
Staunton City					X	
Suffolk City		X				
Surry County			X			
Sussex County			X			
Tazewell County						
Vienna					X	X
Virginia Beach City	X					
Warren County						
Washington County						
Waynesboro City					X	
Westmoreland County				X		
Williamsburg City		X				
Winchester City						
Wise County						
Wythe County					X	X
York County		X				